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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,140	09/06/2000	Daisuke Shinohara	500.38991X00	9175

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EXAMINER

MAURO JR, THOMAS J

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,140

Applicant(s)

SHINOHARA ET AL.

Examiner

Thomas J. Mauro Jr.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-10 are pending. A formal action on the merits for claims 1-10 follows

Specification

2. The abstract of the disclosure is objected to because the abstract is too lengthy. Please correct. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 8 is objected to because of the following informalities:
 - Improper order of words, "registering previously identification information" has been interpreted as and should be changed to -- previously registering identification information --.
- . Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,292,890 to Crisan.

With respect to claim 1, Crisan teaches a maintenance method for use in a computer system having a remote management subsystem (**Crisan -- Col. 6 line 9 – Central server**) and an information processing apparatus (**Crisan -- Col. 6 line 9 – Computer**) provided with a communications device for communicating with said management subsystem (**Crisan -- Col. 4 lines 48-49 – Network interface card (NIC)**), for maintaining said information processing apparatus, comprising the steps of:

- a. Instructing from said remote management subsystem to said information processing apparatus to set said communications device as a boot device to obtain a program when said information processing apparatus is booted (**Crisan -- Col. 6 lines 10-13, lines 25-31 and lines 65-67 – Network server sends “wake-up” packet to**

network computer which alters the boot order to boot from the network and obtain master copy of operating system for maintenance);

b. Setting said communications device as the boot device by said information processing apparatus according to said instruction (**Crisan -- Col. 6 lines 65-67 and Col. 7 lines 1-4 -- CPU alters boot sequence to boot from network, i.e. communication device);**

c. Instructing a system reset from said remote management subsystem to said information processing apparatus (**Crisan -- Col. 6 lines 39-40 and lines 65-67 -- Network server sends "wake-up" packet which causes system to reboot, i.e. reset);**

d. Resetting said information processing apparatus according to the system reset instruction (**Crisan -- Col. 6 lines 44-52); and**

e. Starting the execution of a maintenance program by acquiring said maintenance program from said remote management subsystem by said information processing apparatus with said communications device used as the boot device to boot the system (**Crisan -- Col. 6 lines 25-35 -- Maintenance program is loaded onto network computer by network server on boot).**

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,292,890 to Crisan in view of U.S. Patent No. 6,266,809 to Craig et al.

Regarding claim 2, Crisan does not explicitly teach the invention as claimed. Crisan, however, discloses that system administrators can use this invention to perform various system maintenance activities on network computer using automated maintenance software (**Crisan -- Col. 6 lines 25-35**). Craig teaches the invention substantially as claimed, a maintenance method wherein said maintenance program acquired from said remote management subsystem in said execution starting step is a program for updating firmware possessed by said information processing apparatus (**Craig -- Col. 6 lines 7-8 – Image loaded from network server is for updating firmware**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the program for updating firmware as taught by Craig into the maintenance software of Crisan in order to achieve the aforementioned benefit of performing a routine type of maintenance activity remotely on network computers.

Regarding claim 3, Crisan teaches the invention substantially as claimed, a maintenance method further comprising a step of controlling on/off of the power of said information processing apparatus according to an instruction from said remote management subsystem after the execution of the maintenance program is completed (**Crisan -- Col. 5 lines 25-29 and Col. 6 lines 33-35 and lines 47-48 – System can “wake up”, i.e. power on the system and can**

power it down. Once maintenance is complete, reference implicitly teaches that a re-boot, i.e. restart, is necessary to switch from running software/OS from the network to the local disk by re-booting using the original/normal boot sequence).

Regarding claim 4, Crisan does not explicitly teach the invention as claimed. Craig, however, teaches the invention substantially as claimed, a maintenance method comprising the steps of: acquiring information about the firmware from said information processing apparatus, which has the information about the firmware, by said remote management subsystem (**Craig -- Col. 7 lines 5-6 – Server obtains firmware date and/or revision code from network computer**); and judging a program to be sent to said information processing apparatus according to the information about the firmware (**Craig -- Col. 7 lines 3-4 - Server determines if network computer needs firmware update**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the ability of the remote management subsystem, i.e. server, to gather information, i.e. revision code or version number, regarding the eligibility/need of the network computer for the update as taught by Craig into the invention of Crisan in order to assure errors are not made and time/network usage is not wasted by sending wrong or unneeded updates to a network computer.

Regarding claim 5, Crisan does not explicitly teach the invention as claimed. Craig, however, teaches the invention substantially as claimed, wherein said execution starting step includes a step to check that the obtained maintenance program is an appropriate program (**Craig Col. 7 lines 32-36 – System checks to ensure image, i.e. program, has not been tampered**

Art Unit: 2143

with and is the proper program for the network computer).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a check to ensure the obtained program is appropriate for the network computer as taught by Craig into the invention of Crisan in order to further provide a mechanism to reduce the risk of damaging a system by installing the wrong update, i.e. firmware, which could render the system un-bootable.

Regarding claim 9, Crisan teaches the invention substantially as claimed, wherein the setting of said boot device and said reset are performed by a management agent which operates on said information processing apparatus (**Crisan -- Col. 6 lines 47-67 – Management agent, i.e. CPU or power management unit, re-orders the boot sequence and controls on/off for the network computer).**

Regarding claim 10, Crisan teaches the invention substantially as claimed, wherein said boot device is set by said management agent which calls an I/O routine of the firmware in an environment where an operating system of said information processing apparatus is operating (**Crisan -- Col. lines 65-67 and Col. 7 lines 1-4 – CPU re-orders boot list which implicitly implies that it performs an I/O routine of the firmware, i.e. BIOS, of the OS to change the boot sequence).**

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan in view of Craig as applied to claims 1 and 5 above, and further in view of U.S. Patent No. 6,584,495 to Bisset et al.

Regarding claim 6, Crisan in view of Craig does not explicitly teach the invention as claimed. Craig, however, discloses that validation of the image, i.e. software, is performed using methods common for validating operating systems and that encryption may be utilized to increase security of the image when transferred (**Craig -- Col. 7 lines 36-42**). Bisset teaches the invention substantially as claimed, wherein said checking step includes a step of obtaining a certification file corresponding to said maintenance program from said remote management subsystem and a step of inspecting said maintenance program according to said certification file (**Bisset -- Col. 5 lines 66-67 and Col. 6 lines 1-9 – System downloads a program from a remote computer, verifies the certificate and validates the digital signature to ensure program is uncorrupted**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of a certificate to validate and verify the validity of a downloaded program as taught by Bisset, into the invention of Crisan, in order to achieve the aforementioned benefit of ensuring the program is from a valid source and is uncorrupted.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan in view of U.S. Patent No. 6,088,738 to Okada.

Regarding claim 7, Crisan does not explicitly teach the invention as claimed. While Crisan does not explicitly teach acquiring identification information, which is used to obtain said maintenance program by said information processing apparatus, by said remote management subsystem, it is obvious that in order for the system to send a “wake-up” packet to a network computer to initiate maintenance, a unique piece of identification information would be necessary to distinguish one network computer from the next and to choose only one [those] computers which require the maintenance. Therefore, Crisan implicitly teaches this limitation, as it would have been obvious to one of ordinary skill in the art at the time of the invention to use a unique identifier to distinguish between machines.

Okada teaches sending a request to obtain a pseudo maintenance program by said identification information (**Okada -- Col. 4 lines 47-49 – Lower apparatus, i.e. network computer, sends request for a pseudo program by name**); and checking the presence or not of a reply to the request to obtain the pseudo maintenance program (**Okada -- Col. 5 lines 1-7 – Information regarding the pseudo program name is transmitted to the upper apparatus, i.e. server, for review**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include sending pseudo program name requests out on the network by a network computer as taught by Okada into the invention of Crisan in order to further provide early problem detection by ensuring that no other computers are acting as servers and transmitting unauthorized programs to machines.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisan in view of U.S. Patent No. 6,098,116 to Nixon et al.

Regarding claim 8, Crisan does not explicitly teach the invention as claimed. Nixon, however, teaches the invention substantially as claimed, a maintenance method further comprising the steps of: previously registering identification information of an information processing apparatus subjected to maintenance into said remote management subsystem (**Nixon - Col. 3 lines 43-45 – System searches through table of configured devices, i.e. previously registered, for matching MAC address, i.e. identification information**); receiving input of identification information for specifying said information processing apparatus prior to the instruction to set said boot device (**Nixon -- Col. 3 lines 39-43 – Network computer sends request with MAC address to server for configuration services**); and judging whether the received identification information is included in the registered identification information (**Nixon Col. 42-47 – System searches, i.e. judges, table looking for match between received MAC address and those stored previously**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the registering and checking of identification information corresponding to network computers as taught by Nixon into the invention of Crisan in order to ensure that only proper computers registered under a given server are maintained by that server.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

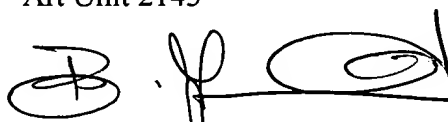
- Reichmeyer et al (U.S. Patent No. 6,286,038) discloses a method of remotely configuring network device equipment from a central server.
- Aguilar et al. (U.S. Patent No. 6,446,203) discloses a method for altering the boot image network computers choose when accessing a boot server.
- Schmidt (U.S. Patent No. 5,826,015) discloses a method for remotely programming firmware and other configurations of a computer over a network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Thomas J. Mauro Jr.
Examiner
Art Unit 2143



BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER

Application/Control Number: 09/656,140

Page 12

Art Unit: 2143

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October 23, 2003